

IMPLANTABLE DEVICES AND METHODS USING FREQUENCY- DOMAIN ANALYSIS OF THORACIC SIGNAL

ABSTRACT

5 This document describes, among other things, systems, devices, and methods
that use frequency domain analysis of a thoracic signal. One example uses
frequency domain analysis for discriminating between different pulmonary
physiological states. Examples of breathing states include normal breathing,
periodic breathing, Cheyne-Stokes breathing, obstructed respiration, restrictive
10 respiration, and pulmonary edema. The frequency domain analysis may also be used
for performing heart rate variability (HRV) diagnostics. In one example, a
frequency domain adaptive filter implements a variable cutoff frequency for
separating heart contraction spectral content and other spectral content from lower
frequency respiration spectral content and other lower frequency spectral content.

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